

Near Station 354. May 7, 1876; St. Vincent towards Azores; lat. 34° 22' N., long. 34° 23' W.; surface temperature, 68° F.

Limacina lesueuri.

Clio (Styliola) subula.

Limacina bulimoides.

Cuvierina columnella.

On May 12, 1876; off the Azores; lat. 42° 52' N., long. 28° 54' W.; surface temperature, 59° F.

Clio (Hyalocylix) striata.

Clio pyramidata.

II. PRINCIPAL STATIONS AT WHICH SHELLS OF THECOSOMATA WERE FOUND IN THE DEPOSITS.

Shells of Thecosomata are never found in sediments from a depth greater than 2000 fathoms. The greatest depth from which they have been procured, as far as I am aware, is 1950 fathoms (Station 35c).

This absence of the calcareous shells of Thecosomata from the greater depths is due, according to Mr. John Murray, to the greater proportion of carbonic acid gas in the water at those depths and to the more rapid solution of these shells in sea water under great pressure. This results in the solution of the delicate Pteropod shells at lesser depths than many other more massive pelagic shells.

The Stations cited below are the principal sources of the deposits which I have examined. The list of Pteropoda Thecosomata (as well as of other organisms) found in the other deposits will be found in the Report on the Deep-Sea Deposits by Mr. John Murray and Mr. A. Renard.

It is of importance to inquire whether the distribution of the shells of different species found in the bottom-deposits corresponds to the actual distribution of the living specimens, or in other words whether the superficial distribution has or has not altered since the time when the shells began to be deposited on the bottom, and whether any species represented by empty shells in a given deposit are also found in actual life at the surface of the same locality.

This inquiry has hitherto yielded but little positive result. The most striking fact concerns the distribution of *Limacina bulimoides*, which is not now known as a living form in the Mediterranean or in the North Atlantic north of 39° N. lat., but is found in the deep bottom-deposits of both these seas. In the North Atlantic *Peracelis reticulata* seemed also to occur further to the north in the deposits than at the surface. It must be noted that these two forms are species frequenting the warmer waters. On the other hand *Limacina retroversa*, which frequents the colder waters, extends somewhat further south in the deposits than at the surface.

The investigation of a larger number of deposits will probably reveal other facts of a like nature.